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## BRITISH COLUMBIA SYRPHIDÆ, NEW SPECIES AND ADDITIONS TO THE LIST.

BY RAYMOND C. OSBURN, COLUMBIA UNIVERSITY, NEW YORK.

In a former paper (CAN. ENT., Vol. XXXVI, Aug.-Sept., 1904) the writer recorded seventy-eight species in this family of Diptera for British Columbia, and suggested that a complete list would probably include twice that number. Undoubtedly that estimate was far too small, if the number of species which have been added in three years by a little sporadic collecting is any criterion. With the present additions the list is swelled to more than one hundred and twenty-five. With the exception of ten species of my own collecting not recorded in my former paper on account of uncertainty of determination, and nine species added by Messrs. Currie and Dyar, of the U. S. National Museum, the material for this additional list has been taken by local entomologists. Especial reference must be made to the excellent work of Prof. R. V. Harvey, of Queen's School, Vancouver, to whose careful collecting twenty-two of the additions are due. The remainder were taken by Messrs J. W. Cockle, of Kaslo; R. S. Sherman, of Vancouver, and A. W. Hanham. In 1906 Messrs. Harvey and Sherman made a tour through the Hope Mts. and along the Nicolum River, securing a fine lot of specimens. In 1903 Messrs. H. G. Dyar, R. P. Currie and A. N. Caudell, of the U. S. National Museum, collected in the Kootenay country, and incidentally took forty-one species of Syrphidæ and added nine species to the B. C. list. Mr. D. W. Coquillett has identified this collection, and very kindly turned over the results to me for publication in the following list. The species resting entirely on his identification are so accredited in the list. My thanks are due to Mr. Coquillett for permission to study carefully the collection of Syrphidæ, containing many of the type specimens, in the National Museum.

### 1. *Microdon tristis*, Loew.

The form *tristis* taken at Kaslo, June 5, 1906, by R. P. Currie, and again by J. W. Cockle on June 5, 1906. The form *cothurnatus* was recorded in our previous list.

2. *Microdon viridis*, Townsend.

Ainsworth, July 11, 1903, by R. P. Currie, and Vancouver, June 11, 1904, by R. V. Harvey.

3. *Microdon marmoratus*, Bigot.

A single specimen taken at Vernon, Aug. 14, 1904, by R. V. Harvey.

4. *Chrysotoxum ypsilon*, Williston.

Kaslo, June 5, 1903, by H. G. Dyar. (Identification by Coquillett.)

5. *Pipiza pisticoïdes*, Williston.

Taken at Kaslo by Mr. Currie on various occasions ranging from June 12 to July 20, and by Mr. Cockle, June 30, 1906.

6. *Pipiza nigripilosa*, Williston.

A single male specimen taken at Vancouver, June 21, 1904, by Harvey, differs from eastern specimens in having the eyes dark pilose instead of light pilose, but otherwise the agreement is very close.

7. *Pipiza quadrimaculata*, Panzer.

Five specimens taken at Vancouver, July 2, 1906, by R. V. Harvey and R. S. Sherman. This European species has not been recorded from North America until very recently. In "Psyche" for August, 1907, Mr. C. W. Johnson notes its capture at North Mountain, Penn., and Mt. Greylock, Mass. The species thus evidently furnishes another example of circumpolar distribution to be added to the already long list among the Syrphidæ. It is easily distinguished from other American species of the genus by the two interrupted yellow cross-bands on the abdomen, forming the four spots which suggest the specific name.

8. *Chilosia chalybescens*, Williston.

Grouse Mt., July 1, 1904, one specimen by R. V. Harvey.

9. *Chilosia occidentalis*, Williston.

Two specimens by R. V. Harvey, one from the Hope Mts., July 24, 1906, the other at Vancouver, June 22, 1906.

10. *Chilosia hoodiana*, Bigot.

One female specimen from Similkameen, July 20, 1906, by R. V. Harvey, I place here, though it shows some differences. The yellow of the knees ("geniculis tibiarumque basi, fulvis," Bigot) is almost wanting, and the fourth abdominal segment is entirely shining.

11. *Chilosia alaskensis*, Hunter.\*

Port Renfrew, July 3, 1901, and Glacier, July 20, 1901, R. C. Osburn; Vancouver, May 6, 1905, R. V. Harvey, and June 5, 1906, R. S. Sherman.

12. *Chilosia pallipes*, Loew.

Four specimens, all females, have the characters given by Loew for the species, "humeri lutei, scutellum luteum" (Cent. Quarta, No. 70). Glacier, Aug. 20, 1902, R. C. Osburn; Goldstream, July 19, 1904; and Similkameen, July 20, 1906, R. V. Harvey.

I must admit that I am not able to separate from this species by any definite characters a much larger number of specimens, of which a majority, and notably all the males, fall unquestionably into *C. tristis*, Loew. Williston at one time placed *tristis* as a synonym of *pallipes* (Syn. N. A. Syrphidæ, p. 41), but later retracted his statement (*ibid.*, appendix, p. 293). I am strongly inclined to the opinion that he was right in the first place, as the humeral and scutellar lutescent markings are extremely variable in extent in my specimens, and in some cases are entirely wanting. The legs also vary in the amount of yellow, and the shape of the first posterior cell may show variation even between the two wings of the same specimen. It is a very significant fact also that the male of *pallipes* has never been described. Pending more complete study of this question, however, I enumerate the following under *tristis*:

13. *Chilosia tristis*, Loew.

Seventeen specimens in all taken as follows: Port Renfrew, July 6, 1901, and Field, July 19, 1901, R. C. Osburn; Goldstream, July 19, 1904; Vancouver, Sept. 24, 1904, and Similkameen, July 20, 1906, R. V. Harvey. Taken also at Kaslo, June 10 and July 2, 1903, R. P. Currie. (Banff, Alberta, July 17, 1901, R. C. Osburn.)

14. *Chilosia nigripennis*, Williston.

Port Renfrew, June 29, 1901, R. C. Osburn, and Vancouver, May 27, 1905, R. V. Harvey.

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\*It is worthy of note that this species has recently been shown to be the cause of the timber blemish known as "Black Check" in the Western Hemlock. The young larva enters an opening made in the bark by a tiny bark beetle (*Hylesinus* sp.), and develops beneath the bark, forming an unsightly scar. Another species, *C. hoodiana*, attacks the White or Lowland Fir in the same manner. These facts put a somewhat different economic aspect on the Syrphidæ as a whole, as they have hitherto been considered entirely harmless or beneficial. For the work and interesting life-histories of these two *Chilosias* see Circular No. 61, U. S. Dept. Agriculture, entitled "Black Check in the Western Hemlock," by Mr. H. E. Burke.

15. *Chilosia plumosa*, Coquillett.

A single specimen taken by the writer at Glacier, Aug. 20, 1901, seems, after comparison with the type, to belong here without question. The species was described from Ormsby Co., Nevada, and has not to my knowledge been recorded elsewhere.

16. *Chilosia cyanea*, Hunter.

Port Renfrew, July 5, 1901, one specimen taken by the writer.

17. *Chilosia* sp.

Two female specimens taken at Hope Mts., July 19, 1906, and at Similkameen, July 20, 1906, by R. V. Harvey. These may be the undescribed female of some species of *Chilosia* already known from the male, but I am not able to fit them in anywhere. I hesitate to give them a new name in such a difficult group. The antennæ are plumose and dark in colour; scutellum with bristly hairs; tubercle much as in *C. tristis*, body metallic-black, with very short yellowish pile; legs black, yellowish at the knees; length, 7 to 8 mm.

18. *Chilosia* sp.

One female taken at Field, July 18, 1902, by the writer. The antennæ are lacking, and I cannot place it in any species known to me.

19. *Melanostoma coeruleescens*, Williston.

Kaslo, July 2, 1903, R. P. Currie. (Determined by Coquillett.)

20. *Melanostoma trichopus*, Thompson.

Nicolum River at Hope, July 14, 1906, and Vancouver, July 7, 1906. Two specimens, by R. S. Sherman.

*(Melanostoma concinnum*, Snow.

Banff, Alberta, July 17, 1901. One specimen by R. C. Osburn.)

21. *Syrphus glacialis*, Johnson.

Vancouver, March, 9; Mission, April 4, and Hope Mts., July 19, 1906, by R. V. Harvey. The species was described from Alaska.

22. *Syrphus geniculatus*, Macquart.

Grouse Mt., July 3, 1904, and Vancouver, June 16, 1906, R. V. Harvey.

23. *Syrphus genualis*, Williston.

Glacier, Aug. 20, 1902, R. C. Osburn, and Kaslo, June 4, 1904, J. W. Cockle.

24. *Syrphus quinquelimbatus*, Bigot.

A single male specimen taken at Mt. Cheam, Aug. 6, 1903, by R. V. Harvey, and one female in the U. S. National Museum from Mr. Coquillett's collection, taken by W. H. Danby, and labeled merely "Br. Columbia."

This species was described from a single female specimen from California (Ann. Soc. Ent. France, 1884, 91), and has not since been mentioned. The male taken by Harvey is sufficiently like the female in the National Museum, and agrees well enough with Bigot's description, so that there can be little doubt as to its identity. The last two abdominal bands on the posterior margins of segments 4 and 5 are wanting in the male. This is the only important difference in the sexes.

25. *Syrphus disjectus*, Williston.

Two female specimens taken by Harvey, Hope Mts., July 18, 1906, compare well with Williston's description of the male. They also agree with the female which Snow (Notes and descriptions of Syrphidæ, Kansas Univ. Quart., July, 1892) lists from Colorado, in having whitish pile and light-coloured lateral margins on the thorax.

26. *Syrphus insolitus*, sp. nov. (Fig. 1.)

Male.—Face, front and cheeks entirely shining bronze-black, with no indication of yellowish; with black pile on the face, front and vertex. Face and front rather swollen, the former nearly perpendicular below the antennæ; tubercle broadly rounded, not prominent. Antennæ dark brown, yellowish below on second and third joints. Occiput with black pile above and yellowish pile below. Thorax bronze-black, with light yellow pile on the sides and black and yellow mixed on the disc (in one specimen the whole disc is covered with black pile, and that on the sides is reddish). Scutellum yellow, with dark reflections, the extreme base black. Abdomen: first segment black, shining; segments 2, 3 and 4 opaque-black except the outer posterior angles, which are shining black, yellow as follows: a pair of spots on the middle of segment 2 attenuated at both ends and reaching forward at the outer ends to the margin, bands of the third and fourth segments entire, attenuated at their ends and nearly or quite reaching the lateral margins; segment 4 narrowly yellow on the posterior margin, and segment 5 with an inconspicuous yellow spot on the anterior outer angle. Hypopygium shining black. Legs: first and second pairs yellow, bases of the femora black; third pair dark, the knees lighter. Halteres yellow. Wings nearly transparent, slightly tinged with dark, stigma dark brown. Length 7 to 8 mm. (*insolitus* = unusual).

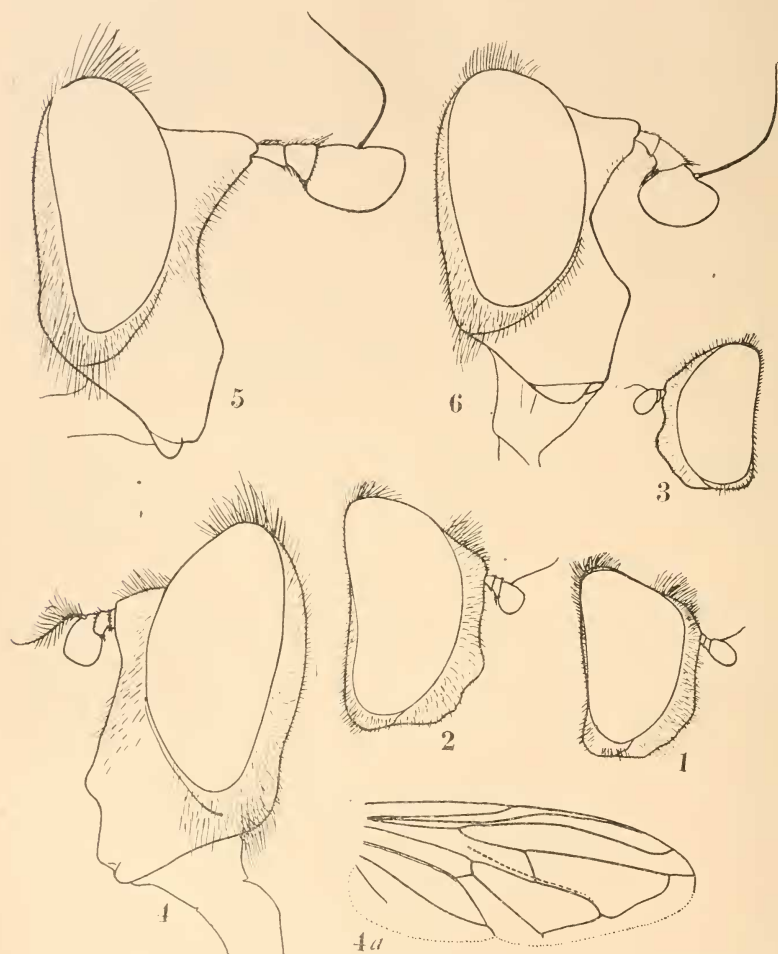


FIG. 1.—1, *Syrphus insolitus*, n. sp., Head of male; 2, *Syrphus conjunctus*, n. sp., Head of male; 3, *Xanthogramma tenuis*, n. sp., Head of female; 4, *Arctophila Harveyi*, n. sp., Head of male; 4a, wing of female; 5, *Sphecomyia occidentalis*, n. sp., Head of male; 6, *Sphecomyia nasica*, n. sp., Head of male.

Three males taken at Vancouver, April 13, 1906, by Mr. R. V. Harvey.

The species is easily distinguished from *S. gracilis*, Coquillett, which also has a shining black face, by the presence of three yellow cross-bands on the abdomen instead of one, by the yellow anterior legs and by the facial tubercle, which is low instead of prominent.



27. *Syrphus conjunctus*, sp. nov. (Fig. 2.)

Male.—Face dark yellow, descending almost perpendicularly to the small tubercle, cheeks shining black, the black continued around in front and up over the tubercle to the middle of the face, but interrupted behind the mouth on the oral margin by yellow; front and vertex black, the former with yellow pollen except near the antennæ. Pile of face, front and vertex black. Antennæ dark, third joint lighter below. Occiput with yellow pile. Thorax shining bronze-black, with some yellowish pollen on the disc, and with yellow pile. Scutellum large, waxy-yellow, pile yellow, with a fringe of dark hairs on the margin. Abdomen black, segment 1 shining, 2 opaque, 3 opaque except the lateral borders, 4 mostly shining, 5 and the hypopygium entirely shining; three broad yellow bands occupying the anterior half of the segments, on segment 2 the band is interrupted and the spots forming it are rounded at their inner ends and attenuated at their outer ends, where they attain the margin of segment; on segments 3 and 4 the cross-bands are complete, but are so deeply incised behind at the middle that they appear at first glance to be interrupted, each half evenly rounded behind, and attenuated at the outer end, where it attains the margin of the segment; segments 4 and 5 are margined with yellow posteriorly, and the outer anterior angles of 5 are yellow. Pile of abdomen mostly black, but yellow on the first two cross-bands. Anterior and middle legs reddish-yellow, black at the extreme base of the femora, and the tarsi infuscated; hind legs reddish-brown; a broad dark band covers most of the femur, and the distal three-fourths of the tibia and the tarsi dark. Halteres yellow. Wings hyaline, slightly infuscate anteriorly, stigma brown.

Length, 8 mm. (*conjunctus* = joined, referring to the apparently interrupted abdominal cross-bands).

Described from one male specimen taken at Hope, on the Nicolum River, July 14, 1906, by R. V. Harvey.

Evidently related to *S. macularis*, Zetterstedt, but differs in having the eyes bare, and the black of the face and legs much more restricted, while abdominal bands 2 and 3 are incised but not interrupted.

28. *Syrphus* sp.

A somewhat teneral female, Glacier, Aug. 20, 1902, R. C. Osburn, I am not able to place in any species known to me.

29. *Xanthogramma divisa*, Williston.

One female taken by R. V. Harvey at Vernon, Aug. 14, 1904.

30. *Xanthogramma tenuis*, sp. nov. (Fig. 3.)

Female.—Face, cheeks and oral margin yellow, the yellow continued above on the sides of the front to the vertex. Vertex and middle of the front nearly to the antennæ bronze-black. Pile very fine and delicate, that of the face whitish, of the front and vertex black. The contour of the face below the antennæ is straight to the tubercle, which is rounded and moderately prominent. Thorax bronze-black, the lateral stripes yellowish, rather obscure; a large obscure whitish patch on the pleura. Scutellum yellow, with dark reflections, the anterior angles blackish. Pile of the thorax and scutellum yellowish, very delicate. Abdomen black, somewhat shining, yellow as follows: a spot on each side of segment 1, cross-bands on the anterior part of segments 2, 3, 4 and 5 interrupted at the middle and reaching the margin broadly; segments 5 and 6 very narrowly yellow on the posterior border. Legs yellow, a broad dark ring on the hind and middle femora and tibiæ, and the hind tarsi infuscated. Halteres yellow. Wings hyaline, stigma yellow.

Length, 7 mm., a weak-looking, delicate species (*tenuis* = slender).

One specimen taken by Mr. R. V. Harvey in the Hope Mts., July 27, 1906.

This species resembles most *S. emarginata*, Say, but differs from it in the facial contour, the interrupted abdominal cross-bands, the smaller size and more slender form.

31. *Toxomerus (Mesogramma) boscii*, Macquart.

Kaslo, June 11, 1903, H. G. Dyar. (Identified by Coquillett.) This species, formerly known only from south-eastern North America, has recently been recorded by Chagnon from Montreal, and by Washburn from Minnesota.

32. *Hammerschmidtia ferruginea*, Fallen.

Kaslo, June 15, 1903, R. P. Currie, and June 14, 1906, J. W. Cockle. The specimen taken by Mr. Cockle is much darker than any others I have seen, so much so that its general aspect is dark instead of reddish. On closer inspection in strong light the ground colour appears through the darker pigment. A specimen from Ft. Morrison, Colorado, in the U. S. National Museum, is intermediate in colour.

33. *Brachyopa notata*, O. Sacken.

April 13, 1906, at Vancouver, ten specimens taken at cherry bloom by R. V. Harvey; April 28, 1906, R. S. Sherman.



34. *Arctophila Harveyi*, sp. nov. (Figs. 4, 4a.)

Male.—Face yellow, with fine yellow pile; a shining black stripe descends from the base of the antennæ over the tubercle, which is quite small, to join with the black shining oral margin and cheeks. Front black, thickly whitish pollinose, and with short black pile. Antennæ reddish, third joint quadrangular, the corners rounded; arista basal, plumose. The antennæ are inserted on black ground. Vertex black, shining, with black pile. Thorax and scutellum black, shining, covered with a thick coat of pile, which is yellowish on the pleura and anterior two-thirds of the thoracic dorsum, but jet black on the posterior third and the scutellum; a fringe of light pile projects from underneath the scutellum behind. Abdomen black, shining, tip of the fourth segment margined with red; pile of the second segment black, that of the third mixed black and yellowish, that of the remaining segments yellowish. Legs black, knees reddish-brown, tips of tibiæ and basal joints of tarsi lighter; pile of legs abundant, mostly black. Halteres piceous. Wings hyaline, with an ill-defined, dilute brownish cloud about the base of the submarginal cell; stigma yellow; third vein entirely straight.

Female.—Similar to the male in all essential respects. The pile of the front and vertex is yellow, intermixed with a few black hairs on the vertex. On the thorax the yellow pile extends back almost to the scutellum. The legs are slightly lighter in colour.

Length, 13 to 15 mm.

Described from one male taken on Mt. Cheam, Aug. 11, 1903, and one female from Hope, July 12, 1906. Both specimens were taken by Mr. R. Valentine Harvey, after whom I take pleasure in naming the species.

The genus *Arctophila* has heretofore been known in America by only one species, *A. flagrans*, O. S., and in Europe by two species, *A. bombiformis*, Fallen, and *A. mussitans*, Fabricius. From all of these *A. Harveyi* differs in having the third vein entirely straight. Otherwise it conforms closely to the generic description. *A. Harveyi* can be distinguished at once from *flagrans* by the black pile of the thorax and by the black facial stripe.

35. *Eristalis Meigenii*, Weidemann.

One female from Vernon, Sept. 9, 1904, and a male from the same locality, Aug. 15, 1906, both taken by R. V. Harvey.

36. *Helophilus similis*, Macquart.

Kaslo, June 3, 1903, H. G. Dyar, and July 20, 1903, R. P. Currie ;  
Vernon, Aug. 15, 1904, R. V. Harvey.

37. *Helophilus conostomus*, Williston.

One specimen taken by Harvey at Vernon, Aug. 12, 1904.

38. *Helophilus porcus*, Walker.

As far as I am aware this species has never been recorded since Walker described it (List, etc., III, 551), and recorded it for the Hudson Bay Territory. Osten Sacken (Cat. Dipt., 250, note 235) says: "It is represented in the British Museum by two (male and female) specimens. I have never seen it elsewhere." There are in the U. S. National Museum three unrecorded specimens, one male from Ottawa, Canada, and a male and female from North Mt., Pennsylvania, taken June 8 by Mr. C. W. Johnson. The specimen in my possession, from British Columbia, was taken at Kaslo by Mr. J. W. Cockle (date not given). The species, though apparently rare, seems to be of wide distribution through boreal America.

39. *Merodon equestris*, Fabricius.

This species has been taken previously a number of times in America, but it has always been assumed that it was in each case an accidental introduction from Europe in plant bulbs in which the larvae live. The occurrence of the species in several localities, and especially the number taken in British Columbia, make it seem certain that it properly belongs to our North American fauna. Mr. Harvey has taken numerous specimens at Vancouver, frequenting especially the flowers of the Salmon-berry (*Rubus spectabilis*).

40. *Xylota marginalis*, Williston.

A male of this species taken by Harvey at Duncan, April 19, 1906, agrees in all respects with Williston's type from the White Mts. of New Hampshire. The species has also been taken in New York, but never before in the west.

41. *Ferdinandea (Chrysochlamys) croesus*, O. Sacken.

A male of this fine species was taken by Harvey at Victoria, June 8, 1906, on a flower of the Yellow Hawk-weed (*Hieracium*). The species has previously been known from Utah and Washington southward.

42. *Criorhina Coquilletti*, Williston.

One female taken by Mr. J. W. Cockle at Kaslo, April 30, 1906.

The female lacks the bronze of the thorax and abdomen, and has bunches of yellow pile on the anterior "corners" of the abdomen, and is also somewhat larger, measuring 13 mm. Otherwise it agrees closely with Williston's description of the male from southern California. The U. S. National Museum has a specimen from Hoquiam, Washington, collected by Mr. Burke.

43. *Criorhina armillata*, O. Sacken.

Kaslo, June 18, and Bear Lake, July 21, 1903, R. P. Currie; Vancouver, April 13, 1906, on cherry bloom, by R. V. Harvey.

44. *Brachypalpus sorosis*, Williston.

Kaslo, June 12, 1903, one specimen by R. P. Currie. (Identified by Coquillett.)

45. *Brachypalpus parvus*, Williston.

One male and three females from Quamichan Lake by A. W. Haham, and one female from Kaslo by J. W. Cockle. These specimens agree closely with Williston's description of the male from Colorado, the only previous record for the species as far as I am aware. The only point of any importance in which they disagree from the description is in the presence of short bristles on the under side of the hind femora, but for that matter so do my specimens of *B. Rileyi*, Williston, from Ohio, so that this is either a matter of variation in both species or else Professor Williston overlooked the point in his descriptions.

The female is similar to the male, but the pile of the body is lighter in colour, and while in the male there are a few black hairs intermixed with the yellow on the vertex and thorax, in the female there is no black pile. The yellow of the legs is more extensive in the female. In size my specimens range from 7 to 10 mm.

46. *Temnostoma equalis*, Loew.

One male at Kaslo, July 17, 1906, by Mr. J. W. Cockle.

47. *Temnostoma alternans*, Loew.

Kaslo, July 21, 1903, by Mr. J. W. Cockle. (Identified by Coquillett.)

48. *Sphecomyia brevicornis*, O. Sacken.

Three specimens, one male and two females, taken at Kaslo, May 6 and 26, 1905, by Mr. J. W. Cockle. The female, which has not hitherto

been described, agrees with the male in every particular, except, of course, the separation of the eyes. My specimens measure considerably larger than those of Osten Sacken, being 14 to 15 mm. The species has heretofore been known only from California.

49. *Sphecomylia occidentalis*, sp. nov. (Fig. 5.)

Male.—Head shaped about as in *S. brevicornis*, but the tubercle is fuller and more rounded, and the face more concave below the antennæ. Cheeks and oral margin shining black. Face entirely covered with dense yellow pollen, which is continued above around the base of the antennal prominence. This prominence, which is shining black, points forward as in *S. brevicornis*, and is not tilted upward as in *S. vittata*. The antennæ are brownish-black, with a black, bare, basal arista; the first two antennal joints are about equal in length, the third somewhat longer and nearly as broad as long, rounded below and nearly straight above, the upper outer corner being quite angular. Pile of vertex black. Thorax black, shining, with black pile intermixed with some yellow, and with yellowish markings as follows: in front, on either side of the midline is a small spot which is continued backward as a faint line, on the humerus another rounded spot, and on the transverse suture another, an elongate spot above the postalar callosities, and a transverse line in front of the scutellum, which in some specimens is connected with a faint mid-dorsal line; on the mesopleura is an oval spot, and under it on the sternopleura a smaller round spot. The scutellum is entirely black, with black pile above and yellow on the sides. Abdomen black, with yellow bands and yellow pile. The bands are as follows: A rather narrow band on the posterior margin of segments 1 to 4, a broader interrupted band across the middle of the black portion of segments 2 to 4 (on segment 4 of some specimens this band is near the anterior margin of the segment, and it may be connected slightly with the posterior band at the lateral margin); all the bands reach the margin. On the venter there are yellow cross-bands, interrupted at the middle, on the anterior margin of segments 2 to 4. The hypopygium is black, with some yellow pollen and with black and yellow pile. Legs yellowish, the femora all brown except the tip, the posterior pair lighter than the others; tibia with a brownish ring about the middle, most distinct on the anterior pair, sometimes entirely wanting; distal tarsi infuscated. Wings clouded with brownish, especially along the veins, stigma yellowish-brown. Halteres yellow.

Female.—Similar to male in all essential respects. The fifth segment of the abdomen is marked like the fourth. The front is considerably

wider than the vertex, while in the male the eyes are narrowly separated. There is a shining black facial stripe extending rather broadly from the tubercle to the base of the antennal prominence, and extending narrowly above to the insertion of the antennæ, and below to the oral margin, where, however, it is not continuous with the black of the cheeks.

Length, 13 to 14 mm. (*occidentalis* = western).

Described from eight males and one female taken as follows: Glacier, Aug. 21, 1902, R. C. Osburn; Vancouver, May 2, 1903; May 9, 1903 (the female); April 23, 1904; April 28, 1906, and Grouse Mt., July 19, 1903, R. V. Harvey; Vancouver, April 21, 1906, and Mission, April 13, 1906, R. S. Sherman; Hoquiam, Washington, April 29, 1904, H. E. Burke. (The last mentioned was kindly lent me by Mr. Coquillett, of the U. S. National Museum.) Mr. Harvey notes the capture of his specimens on blossoms of *Vaccinium parviflorum*, in company with wasps.

The specimen taken by myself was mentioned in my former list (CAN. ENT., Vol. XXXVI, Sept., 1904, p. 262) as doubtfully belonging to *S. Pattoni*, Will. Since then the study of better material, and especially a comparison with the type specimen of *Pattoni*, show it to be entirely different. The absence of a facial stripe in the male, the entirely black scutellum, and the colour markings of the thorax and scutellum (which appear to be very constant) easily distinguish the species.

50. *Sphecomyia nasica*, sp. nov. (Fig. 6)

Male.—Head a trifle broader than the thorax. Face produced downward, deeply concave below the antennal prominence, the lower part of the face with the tubercle projecting prominently forward and downward. Face and front covered with a dense coat of yellowish pollen, the black ground colour appearing on the forward projecting antennal prominence. Cheeks shining black. Antennæ very short, scarcely more than half of the vertical length of the eye; third joint considerably broader than long, brownish-black, and with a long and rather stout black arista. Vertex shining black, with black pile. Eyes narrowly separated. Thorax black, shining, with short black pile, which is intermixed with yellowish anteriorly, bunches of yellow pile on the pleura and postalar callosities; a distinct yellowish pollinose spot on the humerus, and a fainter one adjoining it above, an oval spot on mesopleura and a rounded one below this. Scutellum entirely bronze-black, with yellow pile. Abdomen slightly narrower than thorax, the sides nearly parallel, black, yellow pilose, and marked with yellow as follows: on segment 1 the shining

black is partly obscured by yellow pollen, segments 2, 3 and 4 each with one cross-band of moderate width, situated somewhat nearer the base of the segment, the band on segment 2 is interrupted at the middle, and does not reach the margin, while the others are entire, and attain the lateral margin. The extreme posterior margin of segment 2 is shining, and also the lateral margins, leaving an H-shaped velvety-black area; segments 3 and 4 are velvety-black in front of the cross-band and shining behind it. Hypopygium shining black. Venter with yellow cross-bands on segments 2 and 3. Femora black except narrowly at the knees; tibiae yellow, with a dark spot on distal half; the front and middle tarsi have the basal joints yellow and the distal joints dark, the posterior tarsi are dusky, with the distal joints darker. Halteres yellow. Wings brownish, especially toward the costal border.

Length, 13 mm. (*nasica* = referring to the nose).

Described from a single specimen taken in the Hope Mts., July 27, 1906, by Mr. R. S. Sherman.

To include the new species of *Sphecomyia*, I have amended Williston's table (Synopsis N. A. Syrphidæ, p. 257) as follows:

1. Antennæ very long, third joint short . . . . . *vittata*.  
Antennæ shorter than head . . . . . 2.
2. Scutellum yellow at base; a complete black facial stripe from antennæ to oral margin . . . . . 3.  
Scutellum entirely black; facial stripe wanting in male (there is in the female of *occidentalis* a stripe which is attenuated at both ends) . . 4.
3. Yellow cross-bands of abdomen very broad . . . . . *brevicornis*.  
Cross-bands narrow . . . . . *Pattoni*.
4. Abdominal segments 2 to 4 each with two yellow cross-bands . . . . . *occidentalis*.  
Abdominal segments with only one yellow cross-band . . . . . *nasica*.

### *ARGYNNIS ASTARTE*, DOUBL.-HEW.

BY HENRY SKINNER, M.D., PHILADELPHIA.

This was the butterfly we did not get. Dr. James Fletcher and the writer arrived at Lake Louise, in the Rocky Mountains of Alberta, on the second day of August. One of the insects we were most anxious to obtain was *Argynnis astarte*, described in 1848, and not rediscovered until 1888. Dr. Fletcher said Mr. Bean had taken the species on the